

and lays its eggs in the fluid which is caught there. I never found it elsewhere; but there it is extraordinarily abundant, and every cabbage yielded ten or a dozen specimens. The fly creeps in a slow, lazy manner. I am very sorry I did not observe whether it climbs to the inflorescence in sunshiny weather; perhaps this may be the case. This is an instance of one of those "neglected opportunities" to which you refer (in the 'Flora Antaretica') as so galling in the retrospect. Even at Heard [Yong] Island I found the same apterous fly nestling on *Pringlea* in abundance. Perhaps the two forms have some relation of mutual benefit."

Note on *Arctomys dichrous*. By JOHN ANDERSON, M.D., F.L.S., &c.

[Read May 4, 1876.]

(PLATE XXXI.)

In a preliminary notice on some new Asiatic Mammals and Chelonia, published by me last year*, I very briefly referred to a few specimens of Marmot obtained in the mountainous country to the north of Kabul, and which appeared to me to offer peculiarities entitling them to specific distinction. Since then my attention has been called to a paper by Mr. Blanford † on the Marmots of the Himalayan range. I am induced, therefore, to lay before the Linnean Society some additional memoranda on my species *Arctomys dichrous*, and place at the disposal of the Council a figure illustrating the animal in question.

Mr. Blanford (*l. c.*) gives a succinct epitome of the history of the nomenclature and synonymy of the Himalayan and Tibetan Marmots, and expounds and criticises all the published data concerning the supposed species from the above regions. A study of skins and skulls in the Indian Museum, Calcutta, and some comparisons of other material incline him to consider that there are four species, possibly a fifth (with that mentioned by myself). Those best characterized he gives as under-mentioned, and he suggests my *A. dichrous* as probably the form indicated by Burns and Griffith, while *A. robustus*, M.-Edw., he sinks in *A. himalayanus*, Hodg.

Sect. I. Short-tailed Marmots, having the tail less than one third the length of the head and body. 1. *A. himalayanus*, Hodgson.

Sect. II. Marmots with tails one third or more than one third the length of the head and body. 2. *A. hemachalanus*, Hodgson. 3. *A. caudatus*, Jacquemont. 4. *A. aureus*, Blanford.

My intention here, however, is not to discuss the conclusions arrived at by Mr. Blanford, but, in giving a more detailed description of *A. dichrous*, to enable comparison to be made between it and his *A. aureus*.

With regard to the size of the Kabul Marmot (*A. dichrous*), I had formerly incidentally mentioned the body as being 17 inches, and tail 6½ inches long. These were measurements taken roughly in a straight line. I now, in the subjoined tabular form adapted from Mr. Blanford's paper, give more exact data, in inches and decimals, from the specimen in the British Museum, and corresponding to those of *A. aureus* given by him (*l. c.* p. 123).

* Ann. & Mag. Nat. Hist. 1875, (ser. 4) vol. xvi. p. 282.

† "On the Species of Marmot inhabiting the Himalaya, Tibet, and the adjoining Regions," by W. T. Blanford, F.R.S., F.Z.S. (Journ. Asiat. Soc. Beng. 1875. pt. 2, no. 3, vol. xlv. pp. 113-127).

	<i>A. dichrous.</i>	<i>A. aureus.</i>
Length taken on the dried skins.		
Nose to insertion of tail	18·5	16·5 to 18·75
Tail, without hairs at the end	7·5	5·0 to 6·5
Hairs at end of tail	1·0	1·5 to 1·75
Fore foot (palma) to end of toe, without claws	2·2	2·05
Mid toe, without claw, measured below	0·5	0·8
Claw, measured above	0·4	0·6
Hind foot (planta) to end of toe, without claws	2·9	2·9
Mid toe, without claw	0·6	0·8
Claw of mid toe, measured above	0·5	0·52

As far as one can make out from the above, it would seem that the two species in question bear considerable resemblance to each other in size. This is equally manifested in the dimensions of the skull as shown below. Mr. Blanford (*l. c.* p. 124) has ranged together a series of cranial measurements (in parts of a metre) of several species; and taking his points to start from, the relative sizes of the skulls of the animals from Yarkand and Kabul are below seen at a glance. The greatest difference appears in the width at the zygomatic arches; but injury to those of *A. dichrous* renders the diameter a doubtful one. The dimensions are in millimetres.

	<i>A. dichrous.</i>	<i>A. aureus.</i>
Length from occipital plane to anterior end of nasal	90	94
Breadth across widest part of zygomatic arches	48 ?	57
" " behind postorbital processes	20	17
Length of nasal bones	33	38
Breadth of nasal bones behind	11	10
" " in front	15	16
Length of row of upper molars	20	20
" lower jaw from angle to alveolar margin	45	66
Height of lower jaw at coronoid process	32	35

Circumstances have caused my comparisons with the Marmot skulls in the British Museum to be meagre; and moot points suggested by Mr. Blanford I shall not here enter into. The skull marked *A. bobac* (*A. gigantea*, Brandt, from Kamtschatka) agrees in most respects with that of *A. dichrous*, but is considerably larger, the mandibular angle of the former, however, being more produced and stronger than in the latter. Of two other skulls, also labelled *A. bobac* (? = *A. himalayanus*, Hodg.), one appears young, the other fully adult. *A. dichrous* much resembles the younger specimen, but it differs from the more aged one in its postpalatines being narrower and deeper, in less emargination of the bone above the hinder angle of the lower jaw, and in the mandibular body being less arched. A skull marked *A. tibetanus* (Tibet, Hodgson) (? = *A. hemachalanus*, Hodg.) is evidently young, inasmuch as the processes and occipitoparietal crests are undeveloped, with other signs of immaturity. Its postpalatine region is comparatively shallow and wide, and the posterior free border of the mandible is relatively straighter than that of *A. dichrous*.

In my former notice I described the colour of the skin of *A. dichrous*, which, as the trivial name implies, is of two shades—a rusty yellow above, and a dark rich brown on all the underparts, tail included. The hair, moreover, is long and remarkably *harsh in texture*, although there is an under-fur, so to speak, which is shorter, weaker, and dark-coloured.

It still appears that there is good ground for the specific distinction of *A. dichrous*, although the *A. aureus* of Blanford agrees in several respects. Whether the animal incidentally referred to by Dr. Griffith as having been obtained at an altitude of 11,000 feet in Afghanistan, but heretofore undescribed, is identical with my *A. dichrous*, as Mr. Blanford seems inclined to believe, is a matter still *sub judice*. On my return to Calcutta, I hope to be able to elucidate certain of the doubtful points raised but requiring further investigation.

PLATE I. SINGAPORE.

Fig. 1

